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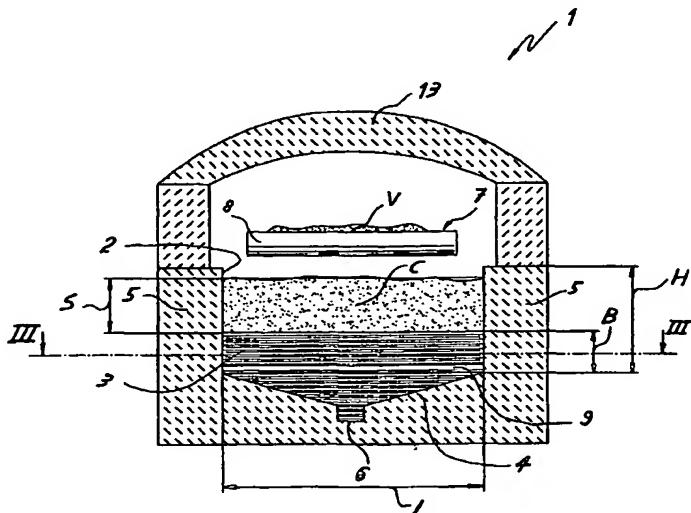
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**(57) Abstract:** An electric furnace (1) for melting vitrifiable materials (V), in particular for the manufacture of vitreous mosaic materials and ceramic frits as well as for the vitrification of waste, where the primary material is frequently changed, comprises a melting tank (2) for containing a molten bath (3) with a head (B), having a floor (4) and side walls (5), channels (6) for discharging the molten materials, a crown (13) which is situated above the floor (4), means for introducing a primary batch of vitrifiable materials (V) into the tank (2) and for depositing a covering layer (C) on the molten bath (3), and a plurality of electrodes (9) with a predetermined shape and position, situated inside the tank (2) for melting completely the vitrifiable materials (V) by means of diffused electric currents. The electrodes (9) substantially rest on the floor (4) so as to reduce to a minimum the head (B) of the molten bath (3), with a consequent reduction in the time required to change the primary batch and the power consumption.

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